I'm not a bot

Yaesu ft 897 filter problem

Yaesu ft-897 review. Yaesu ft-900 review. Yaesu ft-950 factory reset.

This is a user manual for the FT-897/D HF/VHF/UHF ALL MODE Transceiver, providing technical information necessary for servicing this equipment. Servicing requires expertise in handling surface-mount chip components, and attempting to service without proper qualifications may result in permanent damage not covered by warranty and potentially be illegal in some countries. Operating Temperature Range: ±4 ppm from 1 minute to 60 minutes after power-on at 25°C with a frequency stability of ±0.5 ppm per hour. The transceiver requires a normal operating voltage of 13.8 VDC ±15% and a negative ground supply voltage of FNB-78 (Ni-MH battery pack) or 13.2 V for optional use. The receiver is a double-conversion superheterodyne circuit type, with intermediate frequencies of 2nd: 455 kHz and SSB/CW sensitivity ranging from 100 kHz to 1.8 MHz at 32 µV, and 28-30 MHz at 0.5 µV. Exploded views and miscellaneous parts are provided, including the top case RA0397700, SP net (VND-100), rocker switch N2090071, sponge rubber RA0398100, blind sheet M4090165, speaker holder RA041290A, and lead clamper P1090352. A block diagram and interconnection diagram are also included. The circuit description outlines the internal assembly of the FT-897/D, including the main 1st mixer circuit/1st IF circuit unit, PLL unit, PA unit, panel unit, BATT-CONN unit, and SSB/CW demodulator circuit. The ALC circuit is used for alignment purposes, requiring digital DC power. High-Z (1 M-Ohm/V) not required once transceiver leaves factory, unless damage occurs and parts replaced later. Then realignment might be necessary. Local Oscillator Adjustment: Connect frequency counter to TP1032. DC voltmeter should be connected to pin 6 of J2002 (TP1028). Adjust trimmer capacitor (TC5001) for 67.875000 MHz, then tune transformer/ref frequency based on table provided. Terminate J1004 into ammeter. PLL Adjustment: Unlock exciter stage idling current by connecting DC voltmeter to pin 1 of J2002 (TP1027). Disconnect reference oscillator input by unplugging cable; confirm that the voltmeter shows less than expected reading. Turn both VR1001 and VR1002 fully counterclockwise. FM TX IF Adjustment: Tune frequency to 28 MHz band. Connect RF millivoltmeter to TP1033 and leave J1002 terminated into a 50-Ohm dummy load. RX Adjustment: UHF Band Alignment requires PA Unit connection. Connect DC voltmeter to TP1044. Do not connect signal generator directly to J1003, as DC voltage is present there. Tune transceiver to 439.995 MHz in the CW mode. Power Amplifier Adjustment: Terminate antenna jack into a 50-Ohm dummy load. Set mode to CW and tune transceiver to any HF band or 50 MHz band. Battery Indicator Alignment: Connect DC power supply to pin 4 of JP4007, and connect pin 6 to ground lead from the power supply. RX Gain Adjustment: Select CW mode and tune transceiver to 1.8 MHz band. Select "HF1RXG" in menu by rotating knob. Over-current Protection Adjustment: Set mode to CW and select menu item "18: HF1-IC". Tune transceiver to 1.8 MHz band in the CW mode. **Calibration Procedures** To ensure proper functioning of the transceiver, follow these calibration steps: 1. **VHF Band Calibration**: Set the frequency to 144 MHz and key the transmitter to confirm output power of 5 W (±1 W). Adjust Reverse ALC as necessary. 2. **FM Modulation Adjustment**: Tune to 144 MHz in FM mode, connect an FM linear detector, and adjust the transceiver's modulation settings. 3. **VSWR Adjustment**: Connect a dummy load to the antenna connector and tune the transceiver to 144 MHz in CW mode. **Component Identification** The MAIN Unit contains various electronic components, including: * ICs (e.g., BU4094BCFV-E2, NJM2902V) * Transistors (e.g., 2SK2973, 2SA1602A) * Capacitors (e.g., UPC2710T, C1F) * Resistors (e.g., BB304CDW) **Note** These calibration procedures and component lists are specific to the MAIN Unit of the transceiver. Refer to the manufacturer's documentation for more information. I tried to preserve the original meaning and structure of the text while simplifying the language and formatting. The main unit of the device consists of several components, including a phase-locked loop (PLL), reference units, and various electronic parts. The list includes over 100 different components, including capacitors, resistors, and other electronic components. The components are grouped by part number, with each group listing multiple values for the same part number. For example, under the part number "C 1070", there are several entries for a capacitor value of 120pF from different manufacturers (UMK105CH121JW-F, TMK105CH151J50PT, etc.). The text also includes information on the tolerance and layout of each component, as well as the lot numbers and quantities. The list appears to be organized by page number, with some sections being dedicated to specific components or groups of components. Overall, this list provides detailed information on the electronic parts used in the main unit of a device, which can be useful for identifying and sourcing replacement parts or understanding the device's electronics. **Component List** This document lists various electronic components used in a device, including capacitors, diodes, and connectors. The list includes: * Capacitors: chip capacitors with values ranging from 0.1uF to 1000uF, ceramic disc capacitors, and ceramic filters. * Diodes: various types of diodes from manufacturers such as TL and G207. * Connectors: a range of connectors from different manufacturers, including SB20-08WS, 9210B-1-03Z172-T, and P0090615. The list is organized by component type and includes the following information for each item: * Designation (e.g. C 1361, D 1054) * Manufacturer's part number * Value or description * Tolerance * Manufacturer Note: The text appears to be a technical document, possibly a bill of materials or a components list for an electronic device. The following is a list of components used in an electronic device, organized by type and reference number. **Capacitors** * A few capacitors with values such as 4.7uH, 0.033uH, and 10uH are listed. * These capacitors have various designations and tolerances. **Integrated Circuits (ICs)** * Several ICs, including BA05FP-E2, UPC2710T-E3, BB304CDW-TL, SA602AD-T, and SPM5001, are listed with their respective reference numbers. * These ICs have various designations, tolerances, and specifications. **Transistors** * A few transistors, including 2SB624-T2B, RT1N241M-T11-1, and 2SC4154-T11-1E, are listed with their respective reference numbers. * These transistors have various designations, tolerances, and specifications. **Resistors** * A large list of resistors with values ranging from 100k to 680k are listed. * These resistors have a designation of "CHIP RES." and a tolerance of 5%. * They also have a reference number and a value, such as RMC1/16S or RMC1/10T. Note: I've kept the format similar to the original text, with the same level of detail. However, I've tried to simplify the language and make it easier to understand. Let me know if you'd like me to make any further changes! **Component List** The following components are used in various units: * Chip resistors with values ranging from 1282 to 1604 and tolerances of 5% or less. + R1282: 1/16W chip resistor with value 473JTH. + R1330: 1/16W chip resistor with values 101JTH, 151JTH, and 103JTH. + R1384: 5.6k chip resistor with value 562JTH. + R1434: 1/16W chip resistor with value 102JTH. + R1495: 2.2k chip resistor with value 222JTH. * Carbon film resistors + R1604: carbon film resistor. **Balun Transformers and Coils** The following components are used in the MAIN Unit: * Balun transformers (T1016, T1017) * Wide-transmission line coils (T1018, T1019) **PLL Unit Components** The PLL Unit contains various electronic components, including: * Transistors (2SC4154E, 2SC5374, etc.) * Integrated circuits (AD9850BRS, UPC1688G, etc.) * Resistors (R1551, R1553) * Capacitors (C1J, C1C) * Other components (DTC124EU, FQ7925, etc.) Note that the text appears to be a parts list or catalog for an electronic device, with component references and values listed in detail. **Component List** * Processor: + BU4094BCFV-E2 + KIA7805API (with various Q numbers) * Capacitors: + UMK105B102KW-F (0.001uF, 2001 and 2002 versions) + GRM36B103K16PT (0.01uF, multiple versions) + M.RFC (various values, 2002-2026 versions) * Resistors: + RMC1/16S (1/16W, 5% tolerance, various Q numbers) **Circuit Diagrams and Notes** The text also includes circuit diagrams and notes for the PA unit and PLL unit. However, these are not explicitly paraphrased here as they appear to be more technical and component-specific. Overall, the text appears to be a detailed parts list for a complex electronic device or system, likely used in industrial or commercial applications. **Components:** * Capacitors: + Ceramic caps with various values and tolerances + Film caps for voltage regulation and filtering * Diodes: + Rectifier diodes for power supply applications + Switching diodes for switching circuits * Transistors: + Bipolar transistors (BJT) for amplification and switching + Field-effect transistors (FET) for switching and voltage regulation * Other components: + Resistors for voltage division and current limiting + Inductors for filtering and energy storage **Part Numbers and Descriptions:** The text provides part numbers, descriptions, and values for each component. The format is typically: `REF. DESCRIPTION LOT. SIDE. VALUE TOL. MFR'S DESIG VXSTD P/N VERS. LAY ADR.` Where: * `REF.` refers to a reference number or label * `DESCRIPTION` provides a brief description of the component * `LOT.` specifies the lot or batch number of the component * `SIDE.` indicates the side of the PCB where the component is located * `VALUE` and `TOL.` specify the value and tolerance of the component * `MFR'S DESIG` refers to the manufacturer's designator for the component * `VXSTD P/N` provides a vendor-specific part number for the component * `VERS.` indicates the version or revision level of the component * `LAY ADR.` specifies the layout address or location on the PCB where the component is placed. Overall, the text appears to be a detailed parts list for an electronic device, providing information about various components and their specifications. **Component List** The document lists various electronic components with their specifications and part numbers. The components include: * Inductors (L3014-L3019) * Resistors (R3025-R3109) * Transistors (Q3001-Q3005, Q4001-Q4017) * Integrated Circuits (ICs) (Q3001-Q3005, Q4002-Q4012) Each component is listed with its: * Side value * Tolerance * Manufacturer's design number * Voltage and current ratings **Panel Unit** The document also includes a parts layout for the Panel Unit, which lists the components on both sides of the unit. The components include: * Transistors (D4001-D4019) * ICs (Q4002-Q4012) * Resistors (R3025-R3109) The parts layout is divided into several sections, each corresponding to a different lot number. **Circuit Diagram** A circuit diagram for the Panel Unit is also provided, which shows the connections between the various components. Note: The document appears to be a technical specification or user manual for an electronic device, and may require specialized knowledge to interpret. **Schematics and Parts Lists for Various Units** The following sections provide circuit diagrams, parts layouts, and component lists for different units. * **PANEL Unit (Lot. 13-)**: This unit has various components, including chips, diodes, resistors, and ferrite beads. + Page 110: Circuit diagram + Page 111: Parts layout Side A + Page 112: Parts layout Side B + Page 113: Parts list * **MIC Unit (Lot. 4-)**: This unit has a printed circuit board with components, including ferrite beads and diodes. + Page 118: Circuit diagram + Page 119: Parts list * **VR Unit**: This unit has a printed circuit board with components, including resistors, capacitors, and a potentiometer. + Page 120: Parts list * **BATT-CONN Unit**: This unit has a printed circuit board with components, including connectors and resistors. + Page 121: Parts list The parts lists provide detailed information about the components used in each unit, including their values, tolerances, manufacturers' designations, and part numbers. REF Unit (Lot.1 ~ 28) PCB with Components Printed Circuit Board FR005410C C 5001 CHIP CAP... TCXO-9 Unit (Option: Lot.1~28) TCXO-9 Unit (Include: Lot.29~) Printed Circuit Board FR005420C C 5101 CHIP CAP... The Yaesu FT-897, a versatile radio covering HF bands plus 6,2 and 70 MHz... Sold since 2002 with thousands of units still popular today... Details on the manufacturer's website... Great value for money, compatible with various accessories... Small DC voltages applied to filters cause them to fail, but manufacturers claim they won't harm the filters. People have successfully replaced filters with blocking capacitors, however. Faulty ceramic filters in radios show a white salt-like deposit on their surface and a turquoise deposit inside when broken open. This is due to hygroscopic TOKO plastic that absorbs moisture and releases it as heat, causing the internal structure of the filter to short out over time. The surrounding components are small and easily damaged during replacement. Replacing filters requires delicate handling; experts or trusted repair shops should be relied upon for this task. A hint for removal is to gently crack open the filter cases with flat nose pliers before removing the elements, which reduces heat capacity and makes removal easier. It's recommended to source new filters from Yaesu for reliability. Filters can also be found on eBay, but there are risks of counterfeit or poor quality products. I'll just take care of those pesky deposits first. That tiny resistor is another story; I'll need an illuminated magnifier, some cocktail sticks, solder paste, and a super fine tip to handle it safely. Fortunately, my hands are quite steady. Now that's taken care of, I suppose I should also check the FT-817...